Amendments to the Claims:

1. (Currently Amended) A method for the computer-assisted visualization of a three-dimensional anatomical object, comprising the following method steps:

a) recording two or more diagnostic image data records of the object wherein at least one image data record comprises morphological image information of the anatomical object and at least one further image data record comprises functional image information relating to the anatomical object;

b) defining an imaging specification for imaging the image data onto a common two-dimensional display plane, the definition of the imaging specification involving [[the]] an identification of anatomical features of the object in at least one of the image data records and [[the]] a determination of an object volume delimited by a curved surface in which the anatomical features of the object are contained;

c) calculating a combined two-dimensional representation by imaging the two or more image data records according to the previously defined imaging specification onto the common two-dimensional display plane wherein a projection of the image information of the data records that is contained in the object volume is calculated during the calculation of the combined two-dimensional representation.

2-3. (Cancelled)

4. (Currently Amended) [[A]] The method as claimed in claim 1, wherein in order to calculate the combined two-dimensional representation, Cartesian coordinates within the common two-dimensional display plane are assigned to non-Cartesian surface coordinates of the ~~object volume~~ curved surface.

5. (Cancelled)

6. (Currently Amended) [[A]] The method as claimed in claim 1, wherein the functional image information is obtained by evaluating a temporal sequences of morphological image data of the anatomical object.

7. (Currently Amended) [[A]] The method as claimed in claim 1, wherein at least one of the image data records comprises at least one slice image of the anatomical object.

8. (Currently Amended) [[A]] The method as claimed in claim 1, wherein the image data records are recorded by means of computer tomography, magnetic resonance or ultrasound.

9. (Currently Amended) [[A]] The method as claimed in claim 1, wherein the image data records are recorded using different imaging modes.

10-11. (Cancelled)

12. (New) A method of generating a two-dimensional representation on a display plane of three-dimensional anatomical features of interest of the anatomical object, the method comprising:

recording a morphological diagnostic image record of the anatomical object and a functional diagnostic image record of the anatomical object;

delimiting an object volume which includes the anatomical features of interest of the anatomical object with a curved surface;

defining an imaging specification by:

a) projecting the anatomical features of interest from one of the morphological or functional diagnostic image records onto the curved surface to determine a first projection, and

b) projecting the anatomical features along parallel rays from the curved surface onto the display plane to determine a second projection, the imaging specification begin defined by the first and second projections;

using the imaging specification to project the anatomical features of interest of the morphological and functional diagnostic image records onto the image plane to generate the two-dimensional representation of the anatomical features of interest.

13. (New) The method as claimed in claim 12, wherein the curved surface is defined in non-Cartesian coordinates, the projecting of the anatomical features of interest onto the curved surface being performed in the non-Cartesian coordinates.

14. (New) The method as claimed in claim 13, further including:

transforming the anatomical features projected on the curved surface into Cartesian coordinates, the projecting of the anatomical features from the curved surface to the imaging plane being performed in the Cartesian coordinates.

15. (New) The method as claimed in claim 14, wherein the non-Cartesian coordinates include polar coordinates.

16. (New) The method as claimed in claim 14, wherein the curved surface includes at least a portion of the ellipsoid.

17. (New) The method as claimed in claim 12, further including:

performing a scout scan with an MR imaging system to identify a location of the anatomical features of interest;

based on the scout scan, controlling the MR imaging system to generate the morphological and functional image records.

18. (New) One or more processors programmed to perform the method as claimed in claim 12.

19. (New) A non-transitory computer readable medium carrying software which controls one or more processors to perform the method as claimed in claim 12.

20. (New) A imaging system comprising:

at least one diagnostic imaging system which generates a morphological diagnostic image record and a functional diagnostic image record;

one or more processors which perform the method as claimed in claim 12 to generate the two-dimensional image representation from the morphological and functional diagnostic image records; and

a display unit on which the two dimensional image representation is displayed.

21. (New) One or more processors programmed to perform the method as claimed in claim 1.

22. (New) A non-transitory computer readable medium carrying software which controls one or more processors to perform the method as claimed in claim 1.

23. (New) A imaging system comprising:

at least one diagnostic imaging system which generates a morphological diagnostic image record and a functional diagnostic image record;

one or more processors which perform the method as claimed in claim 1 to generate the two-dimensional image representation from the morphological and functional diagnostic image records; and

a display unit on which the two dimensional image representation is displayed.